

UTILITY PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

---

Appl. No.	:	10/750,550	Confirmation No. 5589
Applicant	:	Raj Bridgelall	
Filed	:	12/31/2003	
TC/A.U.	:	2618	
Examiner	:	Rego, Dominic E.	
Docket No.	:	022.0028 (1615)	
Customer No.	:	29,906	

---

**Application for Patent Term Adjustment filed under 37 C.F.R. § 1.705(b)**

Box AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
***\*\*Electronically Filed***

Commissioner:

This is an Application for Patent Term Adjustment filed under 37 C.F.R. § 1.705(b) and MPEP § 2734. It is being filed concurrently with the payment of the issue fee, and is accompanied by the appropriate fees under 37 C.F.R. § 1.18 (f).

**Statement of Facts Involved**

The following recitations address each of the issues required by 37 C.F.R. § 1.705(b)(2):

(i) *The correct patent term adjustment (PTA) is 612 days.* This reflects 641 days of PTO delay, and 29 days of Applicant delay. The difference between the PTA set forth in the Notice of Allowance (541 days) and the correct adjustment (612 days) is 71 days.

*We do not disagree with 641 days of PTO delay computed according to 37 C.F.R. § 1.702. Our Application for Corrected PTA results from PAIR's incorrect computation of Applicant delay under 37 C.F.R. § 1.704. The difference arises from PAIR's incorrect characterization of our Request for Continued Examination filed on October 8, 2007 as a Response After Final Rejection, as described more fully below.*

*(ii) The relevant dates for which an adjustment is sought are October 8, 2007 (the date of our RCE filing) until December 19, 2007 (the date that the RCE was entered in PAIR). We do not challenge the PTO's application of Rule 703(a)-(f) (resulting in a PTO delay of 641 days), as set forth in the Notice of Allowance.*

*(iii) This Application is not subject to a terminal disclaimer.*

*(iv) Rule 704 Delay.*

We do not challenge the 29 days of Applicant delay for the Extension of Time granted from March 1 to March 30, 2007 to respond to the Non-Final Office Action granted from March 1-30, 2007.

We do, however, dispute the 71 day delay from October 8, 2007 until December 19, 2007 in that this delay was caused by a clerical error within the PTO, and not by any actual delay on our part. The pertinent details of this delay are described below.

Applicant electronically filed a Request for Continued Examination under 37 C.F.R. § 1.114 on October 8, 2007. As described in the accompanying documentation, this filing was described as a "Request for Continued Examination" at the time of submittal, was addressed to "Box RCE", and was accompanied by the requisite \$810 fee under 37 C.F.R. § 1.17(e). This filing was within the three-month shortened statutory period for response set in the Final Office Action mailed on July 9, 2008, so no Applicant delay should be assessed for this filing.

Although the PTO promptly debited our deposit account for the \$810 fee, our October 8, 2007 filing was apparently entered into the PAIR system as a Response under Rule 116 rather than an RCE under Rule 114. We became aware of this error when we received an Advisory Action dated November 15, 2007, and we promptly contacted Examiner Rego. At his suggestion, we spoke with USPTO Customer Support, who assured us that a trouble ticket had been opened, and that the matter would be promptly

resolved. When no response was received after several weeks, we again spoke with Examiner Rego, who suggested that we submit an RCE Submittal Form PTO/SB/30 that could be entered into PAIR. We immediately complied with this request, and provided the requested form on December 19, 2007.

We note, however, that 37 C.F.R. § 1.114 does not require the filing of a Form PTO/SB/30, and our filing on October 8, 2007 was an entirely complete and timely response to the Final Office Action dated July 9, 2008. Hence, any delay following October 8, 2007 filing is a result of PTO error in processing the filing, rather than any failure on Applicant's part to engage in reasonable efforts to conclude processing. While we did submit the Form PTO/SB/30 on December 19, 2007, this was provided only as a convenience to the Examiner that allowed for correction of a clerical error in the PAIR database. The filing was not a substantive response, however, and was not required in view of our timely filing of the RCE on October 8, 2007.

As a result, we respectfully request that the patent term adjustment for this matter be 612 days, rather than the 541 days specified in the Notice of Allowance.

*No official fee is believed to be due in connection with this Application, other than the fees addressed elsewhere in this filing. If, however, any additional fee is required to consider this response or to prevent abandonment of this application, please consider this as a request for any extension of time and/or as authorization to charge Deposit Account No. 50-2091 for any fee that may be due.*

Respectfully submitted,  
INGRASSIA FISHER & LORENZ

Dated: 13 June 2008

By: /BRETT A. CARLSON/  
Brett A. Carlson  
Reg. No. 39,928  
(480) 385-5060

## Electronic Acknowledgement Receipt

EFS ID:	2290089
Application Number:	10750550
International Application Number:	
Confirmation Number:	5589
Title of Invention:	System and a node used in the system for wireless communication and sensory monitoring
First Named Inventor/Applicant Name:	Raj Bridgetall
Customer Number:	29906
Filer:	Brett Carlson/Sharron Castillo
Filer Authorized By:	Brett Carlson
Attorney Docket Number:	022.0028 (1615)
Receipt Date:	08-OCT-2007
Filing Date:	31-DEC-2003
Time Stamp:	17:35:04
Application Type:	Utility under 35 USC 111(a)

 COPY

### Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 810
RAM confirmation Number	7962
Deposit Account	502091
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

### File Listing:

10/14

Document Number	Document Description	File Name	Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		0220028_RequestContinued Exam.pdf	148662 18ea966b6c6f4c366debaf053f8e0b0b5336dfe	yes	12
<b>Multipart Description/PDF files in .zip description</b>					
<b>Document Description</b>		<b>Start</b>		<b>End</b>	
Request for Continued Examination (RCE)		1		1	
Claims		2		10	
Applicant Arguments/Remarks Made in an Amendment		11		12	

**Warnings:**

**Information:**

2	Fee Worksheet (PTO-06)	fee-info.pdf	8207 5d8d20e4054789242791403ea01cd09a576131f	no	2
---	------------------------	--------------	---	----	---

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	156869
-------------------------------------	--------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 Indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

## Electronic Patent Application Fee Transmittal

Application Number:	10750550			
Filing Date:	31-Dec-2003			
Title of Invention:	 System and a node used in the system for wireless communication and sensory monitoring			
First Named Inventor/Applicant Name:	Raj Bridgelall			
Filer:	Brett Carlson/Sharron Castillo			
Attorney Docket Number:	022.0028 (1615)			
Filed as Large Entity				
<b>Utility Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	1801	1	810	810
Total in USD (\$)				810

**Saved Applications for Later Submission**

A submission has not been filed officially at the USPTO until the e-filer executes the Confirm & Submit function and the documents are received at the USPTO Eastern Time. The Acknowledgement Receipt is evidence of this submission.

EFS ID	2290089
Saved Date	08-OCT-2007 14:16:41
Title of Invention	System and a node used in the system for wireless communication and sensory monitoring
First Named Inventor	Raj Bridgelall
Customer Number or Correspondence Address	29906
Filed By	Brett Carlson/Sharron Castillo
Attorney Docket Number	022.0028 (1615)
Application Type	Utility

**The following documents have been saved for later submission.**

Files to be Submitted	Page Count	Document Description	File Size	Validation Status Message
0220028_RequestContinuedExam.pdf	12		148662 byte	PASS
		<b>Document Description</b>	<b>Page Start</b>	<b>Page End</b>
		Request for Continued Examination (RCE)	1	1
		Claims	2	10
		Applicant Arguments/Remarks Made in an Amendment	11	12
fee-info.pdf	2	Fee Worksheet (PTO-06)	8207 byte	PASS

**Documents will be saved for your convenience until midnight Eastern Time on 15-OCT-2007 and then will be deleted.**

*If you need help:*

- Call the Patent Electronic Business Center at (866) 217-9197 (toll free) or e-mail [EBC@uspto.gov](mailto:EBC@uspto.gov) for specific questions about Patent e-Filing.
- Send general questions about USPTO programs to the USPTO Contact Center (UCC).
- If you experience technical difficulties or problems with this application, please report them via e-mail to Electronic Business Support or call 1 800-786-9199.



UTILITY PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

---

Appl. No.	:	10/750,550	Confirmation No. 5589
Applicant	:	Raj BRIDGELALL	
Filed	:	12/31/2003	
TC/A.U.	:	2618	
Examiner	:	Rego, Dominic E.	
Docket No.	:	022.0028 (1615)	
Customer No.	:	29,906	

---



Box RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Commissioner:

In response to the Office Action mailed on 9 July 2007, please amend the above-identified patent application as follows and consider the following remarks.

**Claim Amendments** begin on page 2 of this paper.

**Remarks** begin on page 11 of this paper.

Amendments to the Claims:

*The claims are amended without prejudice or disclaimer to read as follows. This listing of claims will replace all prior versions, and listings, of claims in the application.*

1. (Currently amended) A system for wireless communication and sensory monitoring comprising:

a plurality of nodes installed as a network, each of the plurality of nodes comprising:

an internode ~~transceiver~~ physical layer that is configured to manage for wireless radio frequency communication between the node and other nodes;

a wireless network ~~transceiver~~ physical layer separate from the internode physical layer that is configured to manage for wireless radio frequency communication with one or more wireless devices other than the plurality of nodes;

a common antenna coupled to both the internode physical layer and the wireless network physical layer via antenna management logic, wherein the antenna management logic is configured to direct the common antenna to transmit an internode radio frequency signal only in the direction of another of the plurality of nodes and to direct the common antenna to broadcast a wireless network signal to the one or more wireless devices;

one or more sensors for monitoring an environment of a structure; and

a processor coupled to the internode ~~transceiver~~ physical layer, the wireless network ~~transceiver~~ physical layer and the one or more sensors, the processor operable to exchange data with at least one of the other nodes via the internode transceiver physical layer, to exchange data with the one or more wireless devices via the wireless network transceiver physical layer, and to obtain and process data obtained from the one or more sensors coupled to the processor and process the data; and

a wide area network bridge coupled to the plurality of nodes, the network bridge configured to receive data from the plurality of nodes and pass information to a computer network for processing.

2. (Currently Amended) The system of claim 1 ~~wherein the internode transceiver of each node comprises a transceiver wherein the antenna management logic is~~ configured to communicate using a beam steered transmission from the common antenna.
3. (Currently Amended) The system of claim 1 ~~wherein the internode transceiver of each node comprises a transceiver wherein the antenna management logic is~~ configured to communicate using a beam switched transmission from the common antenna.
4. (Currently Amended) The system of claim 2 wherein the ~~internode transceiver is~~ coupled to common antenna is a phased array antenna configured to form the beam steered transmission.
5. (Currently Amended) The system of claim 3 wherein the ~~internode transceiver is~~ coupled to common antenna comprises multiple microwave horn antennas configured to form the beam switched transmission.
6. (Currently Amended) The system of claim 1 wherein the internode ~~transceiver~~ physical layer is configured to transmit in the industrial, scientific and medical band.
7. (Currently Amended) The system of claim 1 wherein the internode ~~transceiver~~ physical layer is configured to transmit at 60 GHz.
8. (Currently Amended) The system of claim 1 wherein the wireless network ~~transceiver physical layer comprises a transceiver that is 802.11 compliant.~~
9. (Original) The system of claim 1 wherein the one or more sensor includes an audio transducer.
10. (Original) The system of claim 9 wherein the audio transducer is coupled to a spotlight antenna for broadcasting audible transmission in a narrow footprint.

11. (Original) The system of claim 10 further comprising a first grouping of one or more nodes of the plurality of nodes and a second grouping of one or more nodes of the plurality of nodes, the first grouping configured to provide for the reception and transmission of audible communication and the second grouping configured to provide for the reception and transmission of audible communication, the first grouping of one or more nodes and the second grouping of one or more nodes together forming a virtual private speaker phone.

12. (Original) The system of claim 10 wherein different audible transmissions are broadcasted based on the location of the node.

13. (Currently Amended) The system of claim 1 wherein the internode ~~transceiver~~ physical layer is configured to transfer information between each of the nodes in an ad-hoc fashion.

14. (Original) The system of claim 13 wherein the processor of each node of the network of nodes is configured to determine the ad-hoc transfer path based on the latency of the node and the latency of other nodes.

15. (Original) The system of claim 1 wherein the one or more sensors include a visual sensor configured to provide a visual record of an event in response to the receipt of a signal from at least one of the one or more plurality of nodes upon detection of the event by at least one of the sensor of the one or more sensors.

16. (Currently Amended) The system of claim 1 further comprising an RFID ~~transceiver~~ physical layer for directing the interrogation of interrogating RFID tags.

17. (Currently amended) The system of claim 16 wherein the RFID transceiver is coupled to the common antenna, and wherein the common antenna is a SPOCK antenna to transmit and receive RF signals.

18. (Original) The system of claim 1 wherein the wide area network bridge is coupled to connect the network to the Internet.

19. (Original) The system of claim 1 further comprising one or more wireless devices configured to join the network of nodes to provide additional functionality.

20. (Original) The system of claim 19 wherein the wireless device is configured to route transmissions from one node of the network of nodes to another node of the network of nodes.

21. (Original) The system of claim 1 where a first node of the network of nodes is configured to utilize sensors on a second node of the network of nodes that is not available on the first node.

22. (Original) The system of claim 1 further comprising a computer having a wireless transmitter, the computer configured to integrate into the network of nodes.

23. (Original) The system of claim 1 further comprising a contactless power system operable to provide power to the nodes with out the use of a wired connection.

24. (Currently Amended) A node for use in a communication and sensor network comprising:

an internode transceiver physical layer that is configured to manage for wireless radio frequency communication between the node and other nodes;

a wireless network ~~transceiver~~ physical layer separate from the internode physical layer that is configured to manage for wireless radio frequency communication with one or more wireless devices that are not other nodes;

a common antenna coupled to both the internode physical layer and the wireless network physical layer via antenna management logic, wherein the antenna management logic is configured to direct the common antenna to transmit an internode radio frequency signal only in the direction of another node and to direct the common antenna to broadcast a wireless network signal to the one or more wireless devices;

one or more sensors for monitoring an environment of a structure; and  
a processor coupled to the internode ~~transceiver~~ physical layer, the wireless network ~~transceiver~~ physical layer and the one or more sensors, the processor operable to exchange data with at least one of the other nodes via the internode transceiver physical layer, to exchange data with the one or more wireless devices via the wireless network transceiver physical layer, and to obtain and process data obtained from the one or more sensors coupled to the processor and process the data.

25. (Currently Amended) The node of claim 24 ~~wherein the internode transceiver of each node comprises a transceiver wherein the antenna management logic is~~ configured to communicate using a beam steered transmission from the directional antenna.

26. (Currently Amended) The node of claim 25 ~~further comprising wherein the~~ directional antenna is a phased array antenna configured to form the beam steered transmission.

27. (Currently Amended) The node of claim 25 ~~further comprising wherein the~~ directional antenna is a multiple horn antenna configured to form the beam steered transmission.

28. (Currently Amended) The node of claim 24 ~~further comprising wherein the~~ directional antenna is a multiple horn antenna configured to form a beam switched transmission.
29. (Currently Amended) The node of claim 26 wherein the internode ~~transceiver~~ physical layer is configured to transmit in the industrial, scientific and medical band.
30. (Currently Amended) The node of claim 26 wherein the internode ~~transceiver~~ physical layer is configured to transmit at 60 GHz.
31. (Currently Amended) The node of claim 24 wherein the wireless network ~~transceiver~~ physical layer comprises a transceiver that is 802.11 compliant.
32. (Original) The node of claim 24 wherein at least one of the one or more sensors includes an audio transducer.
33. (Original) The node of claim 32 wherein the audio transducer is coupled to a spotlight antenna to broadcast audible transmission in a narrow footprint.
34. (Original) The node of claim 33 wherein the node is part of a first grouping of one or more nodes and wherein there is a second grouping of one or more nodes, the first grouping configured to provide for the reception and transmission of audible communication and the second grouping configured to provide for the reception and transmission of audible communication, the first grouping of one or more nodes and the second grouping of one or more nodes together forming a virtual private speaker phone.
35. (Original) The node of claim 33 wherein different audible transmissions are broadcasted based on the location of the node.

36. (Original) The node of claim 24 wherein the node is part of a network of nodes configured to transfer information between each of the nodes in an ad-hoc fashion.

37. (Original) The node of claim 36 wherein the processor of each node of the network of nodes determines the ad-hoc transfer path based on the latency of the node and the latency of other nodes.

38. (Original) The node of claim 26 wherein the one or more sensors include a visual sensor for providing a visual record of an event, the visual sensor initiated by at least one of the one or more plurality of nodes detecting the event using another sensor of the one or more sensors.

39. (Currently Amended) The node of claim 24 further comprising an RFID ~~transceiver~~ physical layer coupled to the processor and the antenna management logic, and wherein the RFID physical layer is configured to interrogate RFID tags.

40. (Currently Amended) The node of claim 39 wherein ~~the RFID transceiver transmits and receives signals using~~ common antenna comprises a SPOCK antenna.

41. (Original) The node of claim 24 wherein the node is configured to receive power using a contactless power supply.

**Claims 42 – 50 (Cancelled).**



51. (New) A node for use in a communication and sensor network comprising:
- an internode physical layer that is configured to manage wireless radio frequency communication between the node and other nodes;
  - a wireless network physical layer separate from the internode physical layer that is configured to manage wireless radio frequency communication with one or more wireless devices that are not other nodes;
  - an RFID physical layer separate from both the internode physical layer and the wireless network physical layer that is configured to interrogate RFID tags in proximity to the node;
  - a common antenna coupled to the internode physical layer, the wireless network physical layer and the RFID physical layer via antenna management logic, wherein the antenna management logic is configured to direct the transmission of a directional internode radio frequency signal on the common antenna only in the direction of another node, to direct the broadcast of a wireless network signal on the common antenna, and to direct communications between the node and any RFID tags in proximity to the node using the common antenna; and
  - a processor coupled to the internode physical layer, the wireless network physical layer and the RFID physical layer, wherein the processor is configured to direct the internode physical layer to exchange data with at least one of the other nodes via the common antenna, to direct the wireless network physical layer to exchange data with the one or more wireless devices via the common antenna, and to direct the RFID physical layer to interrogate the RFID tags using the common antenna.
52. (New) The node of claim 51 further comprising a digital signal processor separate from the processor coupling the internode physical layer and the wireless network physical layer to the antenna management logic.
53. (New) The node of claim 51 further comprising a sensor coupled to the processor, and wherein the processor is further configured to collect and process data obtained from the sensor.

54. (New) The node of claim 51 wherein the antenna management logic is configured to direct the transmission of the directional internode radio frequency signal using beam steering techniques.

55. (New) The node of claim 51 wherein the antenna management logic is configured to direct the transmission of the directional internode radio frequency signal using beam switching techniques.

56. (New) The node of claim 51 wherein the common antenna is a SPOCK antenna.

### REMARKS

Response is made to the Final Office Action dated July 9, 2007. We request continued examination under 37 C.F.R. § 1.114. By this response, numerous claims have been amended, claims 42-50 have been cancelled without prejudice or disclaimer, and new claims 51-56 have been added. Claims 1-41 and 51-56 (48 total claims, including 3 independent claims) remain pending.

The final office action requests clarification of the differences between our claimed inventions and the information described in WIPO Publication No. WO 01/26335 A2 ("Gelvin"). We request reconsideration of the rejections set forth in the Final Office Action because the Gelvin reference, taken alone or in combination with any of the lesser references cited in the Final Office Action, fails to anticipate or suggest each and every aspect of our claimed inventions.

That is, no reference describes a communicating node that has both an internode physical layer and a separate wireless network physical layer that share a common antenna that is capable of directional internode communications as well as wireless network broadcasts. More particularly, no reference taken alone or in combination is able to disclose or suggest at least our claimed feature of *a common directional antenna coupled to both the internode physical layer and the wireless network physical layer via antenna management logic, wherein the antenna management logic is configured to direct the common antenna to transmit an internode radio frequency signal only in the direction of another of the plurality of nodes and to direct the common antenna to broadcast a wireless network signal to the one or more wireless devices*. Claim 51 further recites that the node includes an RFID physical layer that also shares the common antenna. Support for the newly-added language in our claims can be found in our Specification as originally filed, particularly at FIG. 4 and the accompanying text.

While Gelvin does describe a networked node that is capable of sensing environmental feature, the reference does not describe the sharing of a common antenna between multiple physical layers, and certainly does not disclose the use of antenna management logic as now recited in each of our claims. To the contrary, the Gelvin nodes merely communicate using a single wireless protocol. To the limited extent that

multiple forms of communication are available to the Gelvin nodes, only a single wireless protocol is described, with additional communications provided by hardwired Ethernet or serial (RS-232) connections. Indeed, Gelvin is greatly concerned about power management and simplicity; it makes no mention of nodes that are able to communicating using more than one wireless technique, much less able to share a common antenna between different physical layers.

We therefore request reconsideration of the Section 102 and 103 rejections based upon the Gelvin reference, as Gelvin does not describe each and every aspect of our current claims. None of the other references of record are alleged to contain the features of our claims that are not found in the Gelvin reference, and in fact none of the references currently of record disclose the features discussed above. As a result, a detailed review of the other references would be cumulative (and therefore unnecessary) at this point. Similarly, because each of the independent claims contain novel features, there is no present need to discuss the additional features found in the dependent claims. We reserve the right to point out additional features of our various claims and/or to address further shortcomings of the prior art in a later response or, if necessary, on appeal.

In view of the foregoing, we respectfully submit that the above-identified application is in condition for allowance. Should the Examiner have any questions or otherwise wish to discuss any aspect of this Response, we would welcome a telephone call to Applicant's counsel at (480) 385-5060.

*If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee that may be due.*

Respectfully submitted,  
INGRASSIA FISHER & LORENZ

Dated October 9, 2007

By: /BRETT A. CARLSON/  
Reg. No. 39,938  
(480) 385-5060